

**DOCKET NO.: CRNT-0208**  
**Application No.: 10/799,975**  
**Office Action Dated: October 18, 2005**

**PATENT**

**Amendment to the Drawings:**

As suggested, a replacement sheet with a proposed drawing change is submitted for Figure 3 showing insulative material 308.

**REMARKS/ARGUMENTS**

Entry of this response and reconsideration and allowance of the above-identified patent application are respectfully requested. Please note that an information disclosure statement (IDS) has been filed concurrently with the present response. The Examiner is respectfully requested to consider and initial the cited references.

Claims 1-7, 9-25 and 27-39, and 49-52 are pending. By this amendment, claims 1, 4, 5, 10, 11, 22, 25, 27, 29 and 37 are amended. A proposed drawing change is submitted for Figure 3 to show item number 308. Claims 49-52 have been added. Claims 8, 26 and 40-48 are canceled. No new matter is added.

Applicant respectfully submits that, upon entry of the subject amendment, the application will be in condition for allowance. Applicant, thus, respectfully requests consideration of the above amendment and following remarks.

The drawings stand objected under 37 CFR 1.83(a). Claims 1-4, 10-12, 15-19, 21 and 22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,473,780 to Benioff ("Benioff"). Claims 25-26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,398,037 to Engheta et al. ("Engheta"). Claims 25-26 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,563,465 to Frecska ("Frecska"). Claims 5-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Benioff in view of U.S. Patent Application Publication No. 2004/0227621 of Cope et al. ("Cope"). Claims 13, 14, 20, 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Benioff in view of Frecska. Claims 27-39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Frecska in view of Cope.

The present invention is directed to a device which facilitates communications using an antenna at a pad mounted distribution transformer. In one embodiment, the device is coupled to a power line communication system for communicating a data signal. The antenna is located external to the enclosure of the pad mounted transformer. A power line communication device typically is located inside the enclosure of the distribution transformer. A wireless data signal may be received at

the antenna. The incoming signal is coupled from the antenna to the power line communication device. In turn the power line communication device may couple the data to a power line of the power line communication system. For a transmission, a data signal may be received via a power line by the power line communication device. The power line communication device may then provide the data to the antenna for transmission.

Independent claims 1 and 25 have been amended to more clearly recite that the **transformer is a distribution transformer forming part of a power distribution system** and that the **distribution transformer is in a transformer enclosure**. Additionally, as amended, independent claims 1, 25, and 49 all require that the **antenna be communicatively coupled to a communication device located within the enclosure and that is coupled to a power line**. These limitations are similar to those found in originally filed claims 6 and 27.

Claims 1-4, 10-12, 15-19, 21 and 22 stand rejected as being anticipated by Benioff. Benioff discloses a spark transmitter having an antenna encased in a plexiglass dome 2. An impulse transformer 18 generates an impulse to spark electrodes 28, 36. An antenna arm 32 is coupled to one spark electrode 28 via a plate 27. Another antenna arm 35 is coupled to another spark electrode 36 via a plate 30.

Benioff fails to disclose an antenna encased in a material that facilitates attachment to an external surface of the transformer enclosure (housing a distribution transformer that forms part of a power distribution system) as required by claim 1. Furthermore, Benioff does not disclose an interface coupling the antenna to the communication device disposed with the transformer enclosure.

Claim 25 stands rejected under as being anticipated by Engheta. Engheta disclose an antenna element 230 embedded in a dielectric substrate 250. A radome 210 (i.e., a dome-shaped chiral medium) serves as a cover for the antenna element 230. In one embodiment in which the antenna element is embedded in the radome, the antenna is embedded in a non-chiral dielectric portion of the radome (Col. 16, lines 40-46).

Engheta fails to disclose an antenna embedded in a material and located external to the transformer enclosure (housing a distribution transformer that forms part of a power distribution system) as required by claim 25. Furthermore, Engheta does not disclose a communication device located within the enclosure and that is communicatively coupled to the antenna and a power line connected to the distribution transformer.

Claim 25 also stands rejected as being anticipated by Frecska. Frecska discloses an indoor ceiling tile antenna for an indoor wireless communication system, (Col. 1, lines 15-18). The antenna includes a radiating element 20, ground element 40, and dielectric substrate. A ceiling tile serves as the dielectric substrate. The radiating element 20 is fastened to the ceiling tile 30, (Col. 3, lines 20-23). In another embodiment ceiling tile material 90 covers the radiating element 20, (Col. 4, lines 6-8).

Frecska also fails to disclose an antenna embedded in a material and located external to the transformer enclosure (housing a distribution transformer that forms part of a power distribution system) as required by claim 25. Furthermore, Frecska does not disclose a communication device located within the enclosure and that is communicatively coupled to the antenna and a power line connected to the distribution transformer. Additionally, Cope, also cited in the Office Action, does not overcome the deficiencies of Benioff, Engheta, and Frecska.

Claim 49 has been added as an independent claim and similarly claims an antenna located at external to the enclosure and a communication device located within the enclosure and communicatively coupled to the antenna and a power line. Dependent claims 50-52 are likewise similar to claims 30, 33, and 28.

Applicant therefore respectfully submits that independent claims 1, 25 and 49 are patentable over the Benioff, Engheta, and Frecska. In addition, because a claim that is dependent from a patentably distinct claim is also patentably distinct, Applicant respectfully requests allowance of claims 3-24, which depend from claim 1, claims 27-39, which depend from claim 25, and claims 50-52, which depend from claim 49.

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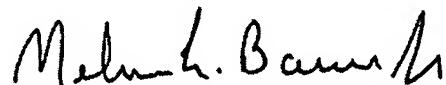
In view of the foregoing, it is respectfully submitted that the claimed invention is patentably distinguished over the asserted prior art references and that the application stands in condition for allowance. It is respectfully requested that the application be reconsidered, that all pending claims be allowed, and that the application be passed to issue.

#### **CONCLUSION**

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact Mel Barnes at (301) 581-0081, to discuss any other changes deemed necessary in a telephonic interview.

Authorization is hereby granted to charge any deficiencies in fees, including any fees for extension of time under 37 C.F.R. §1.136(a), to Deposit Account 50-0687. Please credit any overpayment in fees to the same deposit account.

Date: January 18, 2006



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